

Abstract

The present invention relates to optical glass having a high refractive index, high dispersion, and a low glass transition temperature; a preform comprised of the optical glass for precision press-molding and a method of manufacturing the same; and an optical element comprised of the optical glass and a method of manufacturing the same. An example of the optical glasses for precision press molding is characterized by comprising essential components in the form of P_2O_5 , Nb_2O_5 , WO_3 , TiO_2 , Bi_2O_3 , Li_2O , and Na_2O ; comprising optional components in the form of B_2O_3 , BaO , ZnO , K_2O , Sb_2O_3 , and As_2O_3 ; where the content of Bi_2O_3 exceeds 4 weight percent but does not exceed 15 molar percent; the content of Li_2O exceeds 3 weight percent but does not exceed 15 weight percent; the combined quantity of Nb_2O_5 , WO_3 , TiO_2 , and Bi_2O_3 is from 25 to 45 molar percent; the combined quantity of Li_2O , Na_2O , and K_2O is less than or equal to 42 molar percent; the combined quantity of the essential components and optional components is greater than or equal to 98 molar percent; the refractive index (n_d) is from 1.75 to 2.0; and the Abbé number (v_d) is from 18 to 30.